

What is Claimed is:

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1. A composition for planarizing a substrate, comprising:
a pressure sensitive solution; and
one or more chemical agents comprising a complexing agent for complexing with a metal or oxidized metal, wherein the complexing agent is selected from the group of ammonium salts of organic acids, amines, amine derivatives, compounds with one or more peroxy acid groups, ions of at least one transition metal, and combinations thereof.
 2. The composition of claim 1, wherein the one or more chemical agents comprise between about 10 ppm and about 10 wt.% of the composition.
 3. The composition of claim 1, wherein the one or more chemical agents comprise about 0.5 vol% of the composition.
 4. The composition of claim 1, further comprising abrasive particles.
 5. The composition of claim 4, wherein the abrasive particles comprise about 10 wt.% or less of the composition.
 - ✓ 6. The composition of claim 1, wherein the ions of at least one transition metal are derived from one or more metal salts.
 - ✓ 7. The composition of claim 6, wherein the one or more metal salts comprise a copper salt selected from the group of copper sulfate, copper fluoborate, copper gluconate, copper sulfamate, copper sulfonate, copper pyrophosphate, copper chloride, copper cyanide, and combinations thereof.
 8. The composition of claim 1, wherein the complexing agent comprises a complexing solution comprising up to about 40 wt. % citric acid, up to about 5 wt.% ammonium hydroxide, deionized water, and a pH between about 3 and about 7.

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9. A method for planarizing a substrate surface, comprising:
applying a composition to polishing media, the composition comprising:
a pressure sensitive solution; and
one or more chemical agents comprising a complexing agent for
complexing with a metal or oxidized metal, wherein the complexing agent is
selected from the group of ammonium salts of organic acids, amines, amine
derivatives, compounds with one or more peroxy acid groups, ions of at least one
transition metal, and combinations thereof; and
polishing the substrate surface.
10. The method of claim 9, wherein the composition further comprises
deionized water and one or more pH-adjusting agents to produce a pH between
about 2 and about 11.
11. The method of claim 9, wherein the one or more chemical agents comprise
between about 10 ppm and about 10 wt.% of the composition.
12. The method of claim 9, wherein the one or more chemical agents comprise
about 0.5 vol% of the composition.
13. The method of claim 9, further comprising abrasive particles.
14. The method of claim 13, wherein the abrasive particles comprise about 10
wt.% or less of the composition.
- ✓ 15. The method of claim 9, wherein the ions of at least one transition metal are
derived from one or more metal salts.
- ✓ 16. The method of claim 15, wherein the one or more metal salts comprise a
copper salt selected from the group of copper sulfate, copper fluoborate, copper
gluconate, copper sulfamate, copper sulfonate, copper pyrophosphate, copper
chloride, copper cyanide, and combinations thereof.

17. The method of claim 9, wherein polishing the substrate comprises contacting the substrate surface with the polishing media at a contact pressure between about 1 psi and about 6 psi.

18. The method of claim 9, wherein the complexing agent comprises a complexing solution comprising up to about 40 wt. % citric acid, up to about 5 wt.% ammonium hydroxide, deionized water, and a pH between about 3 and about 7.

19. A method for removal of a copper containing layer from a substrate surface, comprising:

applying a composition to a polishing media, the composition comprising:

a pressure sensitive solution;

about 1 wt.% or less of a solution containing ammonium salts of organic acids; and

about 10 wt.% or less abrasive particles; and

polishing the substrate surface with the polishing media.

20. The method of claim 19, wherein the solution containing ammonium salts of organic acids comprises up to about 40 wt. % citric acid, up to about 5 wt.% ammonium hydroxide, deionized water, and a pH between about 3 and about 7.